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The Impact of Controlling Shareholder Equity Pledge on Stock Price Fluctuation

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Abstract

Equity pledge refers to a method by which demanders of funds pledge their shares to fund suppliers for financing. Especially in recent years, equity pledge financing of controlling shareholders of listed companies has become more and more common. However, with the complexity and change of the macro economy and the constant adjustment of monetary policy, large-scale equity pledges have brought a great impact on the stable operation of the stock market. Concerns about the economic consequences of equity pledges and concerns about the stability of the capital market due to the uncertainty of monetary policy. This article studies the degree of impact of equity pledge on stock price fluctuations from the perspective of monetary policy uncertainty, and analyzes the uncertainty of monetary policy and the transmission of monetary policy around related theories of equity pledged early warning mechanism, monetary policy transmission mechanism, property nature, and corporate management. The degree of influence of the mechanism of action such as the nature of property rights on stock price fluctuations. On the basis of a clear demonstration mechanism, we study the impact of equity pledge on stock price fluctuations in China's A-share listed companies under uncertain monetary policies. At the same time, we consider different levels of stock price fluctuations under different monetary policy changes under different property rights. We select weekly volatility and monthly volatility of stock prices as measures of stock price volatility, select whether there are equity pledges and changes in monetary policy as acceptance variables, and select financial leverage, enterprise size, return on total assets, free cash flow, and price-earnings ratio as controls variable,We set up different regression models based on research hypotheses: Model 1 focuses on analyzing the positive and negative correlation between controlling shareholder's equity pledge and stock price fluctuations; Model 2 and Model 3 analyze the correlation effects between changes in monetary policy, the nature of equity, and stock price fluctuations . The data used in the regression model are from the data of listed companies from 2006 to 2017, and a multiple regression model with fixed annual utility and industry effects is used for empirical research. The empirical results show that controlling shareholder equity pledges will increase stock price volatility. When the uncertainty of monetary policy increases, controlling shareholder equity pledges have no significant effect on stock price fluctuations. We conducted a sample study and found that changes in monetary policy have a greater degree of fluctuation in state-owned enterprise stock prices Non-state-owned enterprises.

Keywords

Monetary policy uncertainty time Lag of Monetary Policy Transmission, equity pledge, stock price fluctuation, property right.

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1. INTRODUCTION

Equity pledge refers to a method by which demanders of funds pledge their shares to fund suppliers for financing. Especially in recent years, equity pledge financing of controlling shareholders of listed companies has become more and more common. In May 2013, the Shanghai Stock Exchange issued the "Measures on Equity Pledged Repo Transactions and Registration and Settlement Business", which provided a systematic basis for on-site equity pledge. Since then, the scale of equity pledge financing has expanded rapidly. As of the end of 2017, the market value of China's A-share listed companies' equity pledges was close to 4 trillion, and the number of listed companies accounted for 98% of the total number of listed companies. In addition, the increase in the uncertainty of monetary policy will increase the risk of default and increase the output. The decline in the level of corporate financing affects sharp fluctuations in stock prices. The continuous deterioration of these factors has caused concern about the economic consequences of equity financing as a financing method and concerns about the impact of uncertain monetary policy on the stability of the capital market.

The pledge of the controlling shareholder's equity in a listed company generally does not affect the controlling position of the majority shareholder of a listed company. However, once extreme conditions are encountered, equity pledges will cause huge fluctuations in the capital market. The controlling shareholder continuously pledges equity to carry out external investment and expansion of the company. Once the company's performance is less than expected and even shows signs of loss, the market will react, which will cause the stock price to drop and the company's value to be damaged [1]; If the price of the pledged stock falls to the contract warning line or liquidation line, the controlling shareholder will be required to provide additional guarantees or even be forced to liquidate by the creditor, thereby triggering the transfer of control risk [2]; Equity pledge may cause the risk of violent stock market fluctuations and even severe shocks to the capital market, the loss of corporate control by listed shareholders, and the appropriation of profits by listed shareholders [3]. Macroeconomic policy is one of the important factors affecting the development of China's real economy. The US financial crisis has hit the world economy hardly. Nearly 10 years have passed. At present, countries in the world are recovering at different levels. In some countries represented by the United States, the economy has experienced a relatively obvious recovery, output has continued to increase, and employment rates have continued to rise; However, countries represented by Europe and Japan are still hovering in the trough, the output is stagnant, and the employment and inflation rates are sluggish. The monetary policy of the United States is constantly tightening, while the monetary policy of the euro area and Japan is easing. The currency adjustments of developed countries have increased the uncertainty of China's economic development and have challenged China's macro-control [4]. Existing literature studies have shown that frequent adjustment of monetary policy can easily lead to uncertainty expectations, increase the difficulty of forecasting both the supply and demand of funds, and make banks more willing to leave credit funds in the financial system to deal with possible risks, leading to a reduction in credit supply [5]. So, after the controlling shareholder pledges equity, when the uncertainty of monetary policy increases, will equity pledge increase the stock price volatility? This paper intends to study the above issues, in order to regulate the controlling shareholder's equity pledge behavior and maintain the stability of the capital market. At the same time, it proposes targeted policy recommendations and improves the effectiveness of macro-control. Reference.

We have expanded on the basis of insufficient research by previous scholars. The innovation of the thesis is reflected in the following aspects: First, this paper starts from the uncertainty of monetary policy, and examines the adjustment relationship between the dynamic adjustment of monetary policy to equity pledge and stock price fluctuation, which enriches the correlation

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between macroeconomic policies and micro-firm behavior the study. Most studies have discussed the impact of monetary policy on corporate behavior from a static perspective, but the time lag of monetary policy is ignored. This paper finds that it is difficult to influence the stock price fluctuations in time due to the path and time lag in the transmission of monetary policy. Research on the transmission mechanism of monetary policy; Second, this paper examines the impact of controlling shareholder equity pledge on the stock price fluctuations of the company, and enriches the research on the economic consequences of equity pledge. The previous literature mainly researched the motivation, risk and influence of the controlling shareholder's equity pledge on the company's performance. This paper studies the impact of corporate subject behavior on the capital market, which will help expand the research scope of the equity pledge field; Third, this paper examines the fluctuations of stock prices of companies with different property rights in the face of equity pledges under the uncertain effects of monetary policy, which enriches the scope of research on the impact of macroeconomics on stock prices. In the existing literature, most of the research focuses on the financing constraints caused by the uncertainty of monetary policy. The research in this paper finds that compared with non-state-owned enterprises, the state-owned enterprise's stock price reflects the degree of monetary policy changes more significantly.

2. THEORETICAL ANALYSIS AND ASSUMPTIONS

2.1. Pledge of Controlling Shareholder Equity Will Increase Stock Price Volatility

The pledge of the controlling shareholder's equity may cause positive stock price volatility or negative stock price volatility. Previous literature usually analyzes from the perspective of the transparency of company information. These studies believe that the more opaque the company's information, the more likely management is to hide "bad news" and cause the accumulation of "bad news." When the company's tolerance reaches its limit, the "bad" "The news" will be released in a large amount in an instant, which will have a huge impact on the capital market and cause the stock price to collapse. Domestic scholars have found that the degree of information opacity increases the risk of negative stock price volatility, and the disclosure of information about accounting conservatism and internal control significantly reduces the magnitude of stock price volatility. The pledge of the controlling shareholder's equity empties the listed company and exacerbates its financing constraints [10], or through stock pledge to realize cash [11] etc. to affect stock price fluctuations. In addition, the company's external environment such as the industry expertise of the auditors, media supervision, tax collection and management, and debt litigation also affected negative stock price fluctuations. On the other hand, when there is equity pledge of the controlling shareholder's equity, it has a strong market value management motivation with listed companies and takes relevant actions to reduce the risk of the company's stock price crash [12]. A study of listed companies in Taiwan in China found that equity pledges have brought performance risks to listed companies. When the overall economy improves, equity pledges can promote company performance. Therefore, we put forward the following hypotheses based on the existing research:

H1: Pledge of controlling shareholder equity will increase stock price volatility

2.2. When the Uncertainty of Monetary Policy Increases, the Pledge of Controlling Shareholder's Equity Has No Significant Effect on the Fluctuation of Stock Prices

Macroeconomic policies are one of the important factors affecting the development of China's real economy and the development of capital markets. Since the financial crisis, the frequent adjustment of China's monetary policy has increased its uncertainty and affected the long-term operation and development of enterprises. Existing literature studies have shown that frequent adjustments to monetary policies easily lead to uncertainty expectations, increasing the

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difficulty of forecasting the supply and demand of funds, making banks more willing to keep credit funds in the financial system to deal with possible risks, resulting in a reduction in credit supply [4], and then increase the financing cost of the enterprise, making the secondary market worry about the future profit of the enterprise, resulting in abnormal stock price fluctuations. Existing studies have shown that the stock market is an important transmission channel for monetary policy, and frequent adjustment of monetary policy will increase the volatility of stock prices and yields. However, at present, due to the single transmission mechanism of China 's monetary policy and the time-varying effect of monetary policy on the economy, it is difficult to calculate the impact of changes in monetary policy on enterprises. In addition, China 's macroeconomic environment is complex and volatile, and the company's internal operating industry faces various risks It is difficult for us to capture the impact of changes in monetary policy on corporate stock price fluctuations in a timely manner. Based on the above analysis, the following hypotheses are proposed:

H2: When the uncertainty of monetary policy increases, the pledge of controlling shareholder's equity has no significant effect on the fluctuation of stock prices

2.3. Under the Uncertainty of Monetary Policy, the Fluctuation of Stock Price of Controlling Shareholder's Equity Pledge Has Obvious Differences Between State-Controlled and Non-State-Controlled Enterprises

In our country, the nature of the property rights of enterprises reflects a great degree of change in monetary policy. The impact of monetary policy on corporate financing constraints is significantly different: the financing constraints of state-owned and large enterprises are less affected by monetary policies; the financing constraints of private SMEs are more affected by monetary policies, and the pain caused by monetary tightening Private SMEs undertake [13]. State-controlled listed companies are greatly affected by national industrial policies and monetary policies. Once economic uncertainty increases and frequent changes in monetary policies will cause increased stock price volatility; non-state-controlled companies will encounter All kinds of risks lead to significant stock price volatility, and equity pledges will not exacerbate non-stock price volatility. Based on the above analysis, the following hypotheses are proposed:

H3: Against the background of uncertain monetary policy, the impact of equity pledge on stock price fluctuations is significantly different between state-owned and non-state-owned.

3. EMPIRICAL DESIGN

3.1. Variable Definitions

3.1.1 How to measure stock price volatility

With reference to the methods of Tan Songtao et al[14], the standard deviations of the weekly return rate and the monthly return rate of stock prices were measured. At the same time, in order to make the volatility indicator closer to the normal distribution, we perform a logarithmic transformation.

$$Yield_d = \frac{clsprc - clsprc_{n-1}}{clsprc_{n-1}} * 100\%$$

3.1.2 Weekly standard deviation of stock price volatility

CSMAR database can directly obtain weekly volatility of stock prices and directly calculate annualized volatility

$$\text{Volatility} = \text{sd}(yield_w)$$

3.1.3 Standard deviation of monthly volatility of stock prices

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CSMAR database can directly obtain the monthly volatility of stock prices and directly calculate the annualized volatility of stock prices.

$$\text{Volatility} = \text{sd}(yield_y)$$

3.1.4 Monetary policy uncertainty

Borrowing from the method of Zhong Kai et al[15], the annual standard deviation of the 7-day interest rate in Shanghai interbank borrowing (ShiborSD) is used as a dynamic indicator to examine monetary policy. The main reasons we use this method for measurement are: (1) The inter-bank lending rate is mainly determined by the supply-demand relationship of the money market. Shibor can reflect the supply-demand relationship of the money market in China; (2) Existing research shows that monetary policy mainly works through shibor as an intermediary channel[14], so the changes in shibor can dynamically reflect the dynamic adjustment of China's monetary policy; (3) Some studies have defined monetary policy by setting dummy variables M2, etc., but these are static monetary policies and cannot reflect the dynamic adjustment of monetary policy.

3.1.5Equity pledge of controlling shareholders

Drawing on the research method of Xie Deren[12], define a dummy variable to measure the controlling shareholder's equity pledge: Define Pledge as the controlling shareholder's equity pledge. If the controlling shareholder has a pledge of equity at the end of the year, Pledge is 1, otherwise it is 0.

3.1.6Shareholding structure

The nature of equity Stat is selected as the moderator to study the degree of influence of controlling shareholder's equity on stock price fluctuations.

3.1.7 Control variables

In order to ensure the accuracy of the empirical results, we control the factors that affect the profitability, growth ability, cash flow, and operating capacity of companies that have stock prices. We select the following control variables: financial leverage (Lev), enterprise size (Size), return on total assets (ROA), free cash flow (FCF), book to market value ratio (MB), price-earnings ratio (PE), and controlling shareholder's share (FSHR), equity nature (STATE), also set annual dummy variables and industry dummy variables. Variable definitions are shown in Table 1.

3.2. Research Model

In order to test the hypotheses proposed above, the research method of Li Wei and Zheng Guojian [17] was used to construct a fixed-effect panel model. Model (I) is used to test the relationship between controlling shareholder's equity pledge and stock price fluctuations. The explanatory variables are weekly stock volatility with and without consideration of cash dividends, the explanatory variables are equity pledge (Pledge) and monetary policy change (ShiborSD); Model (II) borrows from the method of Zhong Kai [15] to measure the fluctuation of monetary policy using the annual standard deviation of the 7-day interbank rate to test the fluctuation of stock prices caused by the uncertainty of monetary policy. Based on the model (II), the effect of the nature of equity on stock price fluctuations is examined, and the coefficient of equity pledge is compared to test hypothesis 3, which is the effect of the nature of equity on stock price fluctuations. This article makes cluster adjustments to the regression standard error at the company and time levels, controls annual and industry effects, and uses the ordinary least squares method of panel data for regression.

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Table 1. Variable definitions

variable		Variable description
Explained variable	week_volatility1	Calculate the volatility of cash dividends in terms of weekly stock returns on investments
	week_volatility2	Volatility calculated without considering the cash dividend in the weekly stock return of the investment
	month_volatility1	Calculate the volatility calculated by considering the cash dividends on the monthly stock returns of the investment
	month_volatility2	Volatility calculated without considering the cash dividends in the monthly stock returns of the investment
Explanatory variables	Pledge	1 if equity pledge exists, 0 otherwise
	ShiborSD	Annual standard deviation of the 7-day interbank rate
Control variable	SIZE	Natural logarithm of total assets
	LEV	Total liabilities divided by total assets
	ROA	Return On Total Assets
	FCF	Free cash flow
	MB	Book value ratio
	ROI	Return on investment
	FSHR	Shareholding ratio of controlling shareholders
	STATE	1 for state-controlled listed companies, 0 otherwise

$$Vol_i = \alpha_0 + \alpha_1 Pledge + \alpha_2 Size + \alpha_3 Lev + \alpha_4 Roa + \alpha_5 Fcf + \alpha_6 MB + \alpha_7 Return + \alpha_8 FSHR + \alpha_9 State + \sum ind + \sum year + \varepsilon \quad (1)$$

$$Vol_i = \alpha_0 + \alpha_1 Pledge + \alpha_2 Size + \alpha_3 Lev + \alpha_4 Roa + \alpha_5 Fcf + \alpha_6 MB + \alpha_7 Return + \alpha_8 FSHR + \alpha_9 State + \alpha_{10} \text{plegde} * \text{std}_{\text{shibor}} + \sum ind + \sum year + \varepsilon \quad (2)$$

3.3. Sample Selection

In order to keep the sample period as long as possible, to study the effect of equity pledge on stock price fluctuations under the uncertainty of monetary policy over a long period of time. When data are available, select A-share listed companies from 2006 to 2017 as the research object. In order to verify the reliability of the results, from 2006 to 2017, CSMAR selected listed companies to consider the cash dividend redistribution and not to consider the cash dividend redistribution weekly and monthly fluctuations of the stock price to calculate the standard deviation of annual stock price volatility; at the same time, we downloaded the Shanghai Interbank Offered Rate from CSMAR data to screen out the 7-day interest rate to calculate the 7-day interest rate standard deviation. This article excludes samples of the financial industry, missing data, ST companies, and owners' equity less than zero. After the above processing, 23423 research samples were obtained.

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4. EMPIRICAL ANALYSIS

4.1. Descriptive Statistical Analysis

Table 2 is the descriptive statistical results of the main variables. It can be seen that the stock price volatility in China's A-share market is relatively large. The presence or absence of cash dividends on stocks does not affect weekly and monthly fluctuations in stock prices, and the differences between individual stocks are large.

Table 2. Variable descriptive statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
week_volatility1	23,423	0.0725	0.0829	9.26e-05	5.269
week_volatility2	23,423	0.0726	0.0834	9.26e-05	5.269
month_volatility1	23,195	0.145	0.143	0.0108	8.332
month_volatility2	23,195	0.145	0.144	0.0108	8.332
plegde	29,461	0.792	0.270	0	1
SIZE	27,352	21.83	1.356	10.84	28.51
LEV	27,352	0.537	5.620	-0.195	877.3
ROA	27,348	0.849	142.8	-2146	23510
FCF	27,311	-0.102	17.12	-1786	1335
MB	26,071	0.910	0.947	2.00e-05	18.45
Reture	24,750	0.310	0.875	-0.869	21.53

4.2. Analysis of Empirical Results

4.2.1 Equity pledge and stock price volatility

Multiple linear regression was performed on model (I). The regression results are shown in Table 3. The result of column (1) shows that when the weekly volatility of the share price considering the cash dividend is used to represent the stock price fluctuation, the regression coefficient of the controlling shareholder's equity pledge (Pledge) is 0.00317. It is significant at a significance level of 10%, which indicates that the controlling shareholder Equity pledge has increased stock price fluctuations and H1 has been verified. We divide the specific samples into state-owned enterprises and non-state-owned enterprises using the model (I) test. The regression results are shown in Tables 4 and 5. Table 4 shows the inspection of non-state-owned enterprises. The results of columns (1) and (2) show that the pledge of controlling shareholders' equity is not significant regardless of the presence or absence of cash dividends. Table 5 is the inspection of state-owned enterprises. The result of column (2) shows that the regression coefficient of the pledge of the controlling shareholder's equity pledge (0.0026) without considering cash dividends is 0.00268, and it is significant at a significance level of 5%, which indicates that the equity pledge of the state-controlled shareholder has increased the stock price fluctuation.

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Table 3. Benchmark regression results

	(1) week_volatility1	(2) week_volatility2
Plegde	0.00317*	0.00314*
	(1.87)	(1.84)
SIZE	-0.00582***	-0.00581***
	(-11.47)	(-11.36)
LEV	0.000165	0.000141
	(0.25)	(0.21)
ROA	0.0000699	0.0000605
	(0.25)	(0.22)
FCF	0.0000468*	0.0000467*
	(1.66)	(1.65)
MB	0.00493***	0.00490***
	(7.07)	(6.97)
Reture	0.0595***	0.0598***
	(71.92)	(71.86)
_cons	0.185***	0.185***
	(15.77)	(15.64)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	21418	21418
R-sq	0.258	0.258

Note: The value of t in the parentheses, ***, **, * indicate significant at the 1%, 5% and 10% levels .Same as below.

Table 4. Non-State-owned Enterprise Inspection

	(1) week_volatility1	(2) week_volatility2
Plegde	0.00200	0.00144
	(0.64)	(0.46)
SIZE	-0.00708***	-0.00707***
	(-7.07)	(-7.02)
LEV	-0.000118	-0.000160
	(-0.13)	(-0.18)
ROA	-0.0000470	-0.0000635
	(-0.13)	(-0.18)
FCF	0.0000513	0.0000511
	(1.34)	(1.33)
MB	0.00991***	0.00983***
	(5.83)	(5.75)
Reture	0.0834***	0.0840***
	(59.79)	(59.78)
_cons	0.212***	0.212***
	(8.64)	(8.58)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	10516	10516
R-sq	0.314	0.314

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Table 5. State-owned enterprise inspection

	(1) week_volatility1	(2) week_volatility2
Plegde	0.00233*	0.00268**
	(1.75)	(2.00)
SIZE	-0.00436***	-0.00430***
	(-10.82)	(-10.62)
LEV	0.00373**	0.00375**
	(2.28)	(2.28)
ROA	-0.00479	-0.00458
	(-1.25)	(-1.19)
FCF	-0.0000246	-0.0000248
	(-0.58)	(-0.58)
MB	0.00122**	0.00119**
	(2.47)	(2.40)
Reture	0.0281***	0.0281***
	(38.80)	(38.63)
_cons	0.153***	0.151***
	(16.93)	(16.69)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	10902	10902
R-sq	0.287	0.286

Table 6. The Impact of Monetary Policy Uncertainty on Equity Pledge

	(1) week_volatility1	(2) week_volatility2
Plegde* std_shibor	0.000564	0.000975
	(0.14)	(0.24)
plegde	0.00291	0.00263
	(0.98)	(0.88)
std_shibor	-0.113***	-0.111***
	(-16.20)	(-15.85)
SIZE	-0.00569***	-0.00567***
	(-10.56)	(-10.46)
LEV	-0.0000124	-0.0000417
	(-0.02)	(-0.05)
ROA	-0.00000300	-0.0000146
	(-0.01)	(-0.05)
FCF	-0.00000236	-0.00000238
	(-0.06)	(-0.06)
MB	0.00492***	0.00487***
	(6.39)	(6.30)
Reture	0.0602***	0.0605***
	(70.42)	(70.36)
_cons	0.199***	0.198***
	(14.57)	(14.41)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	20211	20211
R-sq	0.260	0.260

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4.2.2 The Impact of Monetary Policy Uncertainty on Equity Pledge

In order to verify the hypothesis H2, regression analysis was performed on model (II), and a crossover term of equity pledge and uncertainty of monetary policy was introduced in model (II). The regression results are shown in Table 6. The results of columns (1) and (2) are not significant, indicating that the uncertainty of monetary policy has no substantial impact on stock price fluctuations.

4.2.3 The impact of equity pledge on stock price fluctuations is significantly different between state-owned and non-state-owned

In test hypothesis 1, we used the sub-sample method to test, and in test hypothesis 3, we also used the sub-sample method to test. Tables 7 and 8 examine the state-owned and non-state-owned enterprises respectively. The regression results of the state-owned enterprises are shown in Table 7. The results in column (1) show that the cross-terms are negative under the condition of considering cash dividends, and are significant at a significance level of 10%, indicating the uncertainty of monetary policy and equity Pledges will reduce the stock price volatility of state-owned enterprises. The non-state-owned regression results are shown in Table 8. Regardless of whether or not cash dividends are considered, the uncertainty of monetary policy will not lead to increased stock price fluctuations of non-state-owned enterprises. The results in Tables 7 and 8 confirm that under the uncertainty of monetary policy, stock price fluctuations caused by equity pledges have significant differences between state-owned and non-state-owned enterprises, further verifying H3.

Table 7. The Impact of Uncertainty of Monetary Policy on Equity Pledge (Sub-sample)

	(1) week_volatility1	(2) week_volatility2
Plegde* std_shibor	-0.00604*	-0.00515
	(-1.89)	(-1.61)
Plegde	0.00614**	0.00594**
	(2.52)	(2.42)
std_shibor	-0.0261***	-0.0247***
	(-4.67)	(-4.40)
SIZE	-0.00422***	-0.00416***
	(-9.80)	(-9.60)
LEV	0.00351*	0.00353*
	(1.91)	(1.91)
ROA	-0.00377	-0.00351
	(-0.93)	(-0.86)
FCF	0.00000920	0.00000841
	(0.08)	(0.07)
MB	0.00103*	0.000995*
	(1.89)	(1.81)
Reture	0.0286***	0.0287***
	(37.93)	(37.76)
_cons	0.148***	0.146***
	(13.92)	(13.68)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	10114	10114
R-sq	0.287	0.287

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Table 8. The Impact of Uncertainty of Monetary Policy on Equity Pledge (Non-State-owned Enterprises)

	(1) week_volatility1	(2) week_volatility2
plegde* std_shibor	0.00209	0.00191
	(0.29)	(0.27)
Plegde	0.000865	0.000394
	(0.17)	(0.08)
std_shibor	-0.177***	-0.173***
	(-13.19)	(-12.85)
SIZE	-0.00705***	-0.00705***
	(-6.71)	(-6.66)
LEV	-0.000321	-0.000373
	(-0.33)	(-0.38)
ROA	-0.000131	-0.000151
	(-0.32)	(-0.37)
FCF	-0.000000175	-0.000000197
	(-0.00)	(-0.00)
MB	0.0104***	0.0103***
	(5.56)	(5.48)
Reture	0.0840***	0.0846***
	(58.81)	(58.80)
_cons	0.244***	0.243***
	(8.67)	(8.59)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	10097	10097
R-sq	0.316	0.316

Table 9. Robustness test

	(1) month_volatility1	(2) month_volatility2
plegde	0.00541**	0.00547**
	(2.13)	(2.13)
SIZE	-0.00993***	-0.00990***
	(-13.03)	(-12.85)
LEV	0.000714	0.000681
	(0.71)	(0.67)
ROA	0.000268	0.000255
	(0.65)	(0.61)
FCF	0.0000821*	0.0000818*
	(1.94)	(1.91)
MB	0.00738***	0.00733***
	(7.04)	(6.92)
Reture	0.108***	0.109***
	(87.02)	(86.65)
_cons	0.330***	0.329***
	(18.70)	(18.45)
Industry fixed effects	Yes	Yes
Year fixed effect	Yes	Yes
N	21411	21411
R-sq	0.342	0.340

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5. ROBUSTNESS TEST

In order to verify the reliability of the results, we also selected the monthly fluctuations of stock prices with or without cash dividends for analysis. As shown in Table 9, we can see that equity pledges are positively correlated with stock price fluctuations, and at a significance level of 5% Significant below, the analysis results are not substantially different from the above.

6. CONCLUSIONS AND IMPLICATIONS

This article explores the effect of controlling shareholder behavior and monetary policy uncertainty on stock price volatility from the perspective of equity pledge. The main research conclusions are: controlling shareholder equity pledge will increase stock price volatility, and the impact of monetary policy uncertainty on stock price. Specific analysis is needed. Further research finds that under the uncertainty of monetary policy, equity pledge has different effects on the stock price fluctuations of state-owned enterprises and non-state-owned enterprises. Specifically, in an environment of macroeconomic uncertainty, the share prices of state-owned enterprises brought by equity pledges are more affected than non-state-owned enterprises.

The research in this paper has strong practical significance. First, for controlling shareholders, it is necessary to increase the disclosure of information by major shareholders, avoid “tunneling” problems, and avoid excessive interpretation of shareholder behavior by the capital market. For policymakers, It is necessary to unblock the monetary policy transmission mechanism so that the effectiveness of monetary policy is transmitted to the asset market in a timely manner, and the capital market can be better regulated. For state-owned enterprises, in the face of increasing macroeconomic uncertainty, they must pay more attention to their own operations, do a good job of internal management of the enterprise, and reduce the internal pressure caused by external shocks.

Of course, there are some deficiencies in this paper. For example, there are many influencing factors that cause stock price volatility, and it is impossible to effectively measure stock price volatility. The fluctuation of stock price caused by equity pledges needs to be further explored. This article does not specifically classify industries. Different industries reflect different degrees of changes in monetary policy It cannot be simply divided into state-owned enterprises and non-state-owned enterprises. Future research can discuss these issues.

7. THANKS

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